

Method For Using Query Templates in Directory Caches

Abstract of the Disclosure

The present invention discloses the use of generalized queries, referred to as query templates, obtained by generalizing individual user queries, as the semantic basis for low overhead, high benefit directory caches for handling declarative queries. Caching effectiveness can be improved by maintaining a set of generalizations of queries and admitting such generalizations into the cache when their estimated benefits are sufficiently high. In a preferred embodiment of the invention, the admission of query templates into the cache can be done in what is referred to by the inventors as a "revolutionary" fashion – followed by stable periods where cache admission and replacement can be done incrementally in an evolutionary fashion. The present invention can lead to considerably higher hit rates and lower server-side execution and communication costs than conventional caching of directory queries – while keeping the clientside computational overheads comparable to query caching.